

This listing of claims will replace all prior versions and listings of claims in the application:

IN THE CLAIMS

Claims 1-9. (canceled)

10. (previously presented) Apparatus for separating a fiber suspension comprising a housing, a stator mounted centrally within said housing, a rotary screen rotatably mounted between said housing and said stator thereby dividing said housing into a screen chamber between said housing and said rotary screen and an accept chamber between said rotary screen and said stator, an inlet for providing said fiber suspension to said screen chamber, a reject outlet for withdrawing rejected fiber suspension from said screen chamber, and an accept outlet for withdrawing accepted fiber suspension from said accept chamber, said stator including at least one barrier member fixedly attached to said stator and extending axially along the length of said stator, said at least one barrier member extending radially from said stator to said rotary screen whereby said accepted fiber suspension is substantially prevented from tangentially passing said at least one barrier member and said at least one barrier member creates a pulse through said rotary screen, said at least one barrier member including a pulse surface facing said rotary screen, said pulse surface having a shape such that the distance between said pulse surface and said rotary screen decreases in the direction of rotation of said rotary screen, the decrease beginning from the intersection of the barrier member and the stator.

11. (previously presented) The apparatus of claim 10 wherein said fiber suspension comprises a pulp suspension.

12. (canceled)

13. (previously presented) The apparatus of claim 10 wherein said at least one barrier member extends outwardly from said stator in an axial direction towards said accept outlet and faces in a direction towards the direction of rotation of said rotary screen.

14. (previously presented) The apparatus of claim 10 wherein said at least one barrier member extends radially outwardly from said stator at a predetermined angle.

15. (currently amended) The apparatus of claim 14 wherein said ~~predetermined angle is perpendicular to the direction of rotation of said rotary screen.~~ pulse surface is non-linear.

16. (previously presented) The apparatus of claim 10 wherein said stator, said rotary screen and said housing each has the shape of a cylinder.

17. (previously presented) The apparatus of claim 10 wherein said rotary screen has the shape of a cone, with an increase in diameter in the direction facing towards said accept outlet.

18. (previously presented) The apparatus of claim 10 wherein said at least one barrier member comprises from 2 to 8 barrier members.

19. (previously presented) The apparatus of claim 18 wherein said at least one barrier member comprises from 3 to 4 barrier members.

20. (previously presented) The apparatus of claim 10 wherein the minimum distance between said at least one barrier member and said rotary screen is from 4 to 10 mm.

21. (previously presented) The apparatus of claim 10 wherein said at least one barrier member comprises the outer surface of said stator.

22. (previously presented) Apparatus for separating a fiber suspension through a rotary screen rotatably mounted

within a housing, said apparatus comprising a stator mountable centrally within said housing and said rotary screen, said stator including at least one barrier member fixedly attached to said stator and extending axially along the length of said stator, said at least one barrier member including a pulse surface facing said rotary screen, said pulse surface having a shape such that the distance between said pulse surface and said rotary screen decreases in the direction of rotation of said rotary screen, the decrease beginning from the intersection of the barrier member and the stator.

23. (previously presented) The apparatus of claim 14, wherein said predetermined angle is an angle facing the direction of rotation of said rotary screen.

24. (new) An apparatus for separating a fiber suspension comprising:

a housing;

a stator mounted centrally within said housing;

a rotary screen rotatably mounted between said housing and said stator thereby dividing said housing into a screen chamber between said housing and said rotary screen and an accept chamber between said rotary screen and said stator;

at least one barrier pulse member extending radially from said stator;

wherein said at least one barrier pulse member includes a pulse surface having a shape such that the distance between said pulse surface and said rotary screen decreases in the direction of rotation of said rotary screen, the decrease beginning from the intersection of the barrier member and the rotor.

25. (new) The apparatus of claim 24, further comprising an inlet for providing said fiber suspension to said

screen chamber, said at least one barrier pulse member and said rotary screen acting together to create a negative pressure pulse pulling accept portions of said fiber suspension through said rotary screen into said accept chamber.

26. (new) The apparatus of claim 25, wherein said at least one barrier pulse member and said rotary screen act together to create a positive pressure pulse to push portions of said accept from said accept chamber through said rotary screen into said screen chamber.

27. (new) The apparatus of claim 25, further comprising an accept outlet for withdrawing accepted fiber suspension from said accept chamber, wherein said at least one barrier pulse member and said rotary screen act together to create a positive pressure pulse pushing portions of said accept into said accept outlet.